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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,792	03/12/2004	John David Schnabel	5681-30601	8320

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EXAMINER

BRYANT, DAVID P

ART UNIT	PAPER NUMBER
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3726

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/799,792

Applicant(s)

SCHNABEL ET AL.

Examiner

David P. Bryant

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-30 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-27 and 30 is/are allowed.
- 6) ☒ Claim(s) 28 and 29 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Objections

Claim 29 is objected to because of the following informalities:

In line 3, “sleeve” should apparently be --surface--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 28 and 29 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Auriol et al. (U.S. Patent No. 5,651,172).

Claim 28: See Figures 3 and 9, where Auriol et al. depict a rivet joint that is formed between a plurality of sheets 10, 11 that have been placed together and have a hole 13 extending therethrough, wherein the hole is radially enlarged at the outwardly directed surface of at least one sheet (at 14 in sheet 10) and the rivet joint is formed by means of a rivet sleeve 1 that extends into the or each radial enlargement but does not protrude above the outwardly directed surfaces of the sheet at the radial enlargement of the hole.

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Claim 29: In Figures 3 and 9, note that the hole 13 of the rivet joint is radially enlarged at the outwardly directed surface of both sheets (at 14 in sheet 10 and at 15 in sheet 11) and the rivet sleeve 1 does not protrude above the outwardly directed surface of either sheet.

Claims 28 and 29 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Hufnagl et al. (U.S. Patent No. 4,221,041).

Claim 28: See Figures 1 and 4, where Hufnagl et al. depict a rivet joint that is formed between a plurality of sheets 24, 26 that have been placed together and have a hole 28 extending therethrough, wherein the hole is radially enlarged at the outwardly directed surface of at least one sheet (at 30 in sheet 24) and the rivet joint is formed by means of a rivet sleeve 10 that extends into the or each radial enlargement but does not protrude above the outwardly directed surfaces of the sheet at the radial enlargement of the hole.

Claim 29: In Figures 1 and 4, note that the hole 28 of the rivet joint is radially enlarged at the outwardly directed surface of both sheets (at 30 in sheet 24 and at 32 in sheet 26) and the rivet sleeve 10 does not protrude above the outwardly directed surface of either sheet.

Allowable Subject Matter

Claims 17-27 and 30 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art fails to teach or fairly suggest a rivet joint formed by blind riveting in which the hole through the sheets is radially enlarged at least at the outwardly facing surface of the blind side sheet such that when the sleeve of the rivet is deformed by the mandrel, the deformed

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end of the rivet is accommodated in the enlarged hole and no part of the rivet projects beyond the surface of the blind side sheet.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references disclose various riveting techniques, as discussed below:

Denham et al. (U.S. Patent No. 5,697,141) teach a blind riveting operation in which the end of the rivet sleeve is deformed into a countersunk portion of the sheets. However, the deformed end projects from the countersunk portion, as shown in Figure 1C.

Torre (U.S. Patent No. 3,460,429) and Lees (U.S. Patent No. 2,371,452) teach blind riveting operations in which the end of the rivet is deformed into what appears to be a slightly countersunk opening in the blind side sheet. However, the deformed ends project from the countersunk portions, as shown in Figure 5 of both references.

Briles (U.S. Patent No. 4,048,708) teaches rivets which are deformed into countersunk holes in both sheets. However, neither is a blind riveting process.

Arbegas et al. (U.S. Patent No. 5,120,175) teach a riveting operation in which the end of the rivet is deformed into a countersunk opening of the bottom one of the sheets. However, the deformed end projects from the countersunk portion, as shown in Figure 3(b).

Heidenwolf (U.S. Patent No. 3,047,181) teaches a rivet structure similar to the one depicted in applicant's Figure 4.

Aasgaard (U.S. Patent No. 5,741,099) teaches at least two embodiments of a blind riveting process, one in which the mandrel remains with the deformed rivet (Figure 6), and another in which the mandrel is removed from the deformed rivet (Figure 7).

Bell et al. (U.S. Patent No. 6,445,578) teach a housing for electronics equipment that contains a plurality of rivet joints.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David P. Bryant whose telephone number is (703) 308-1859. The examiner can normally be reached on Monday-Thursday (6:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on (703) 308-1789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David P. Bryant
Primary Examiner
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